



# Data Enabled Forms Technical Presentation

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# Presentation Overview

- The Problem
- The Constraints
- Why PDF?
- PDF/A
- Why AcroForms?
- Why Not XML?
- Using Acrobat Reader



# **Presentation Overview (continued)**

- AcroForm Merging Process
- The FDF File
- Commercial Merging Tools
- Open Source Tools
- Case Upload Issues
- Questions



# The Problem

- Machine extraction of information on documents filed in a bankruptcy



# The Constraints

- Human readable forms
- Standard Bankruptcy forms
- Context of CM/ECF
- Legal documents
- Standards
- Minimum burden on judiciary, end-users and 3d party software providers

# Why PDF?

- Electronic paper
  - Paper image / Electronic image the same
- Proprietary, open standard
- Many tools to create/process PDF
- PDF electronic forms
  - AcroForm
  - XFA Forms



## **(an aside) PDF/A**

- Archiving
- AO deeply involved in creating standard
- Non-proprietary standard
- Judiciary's records keeping issues



# Why AcroForms?

- Part of PDF standard since v1.2
- Well understood
- Many alternate sources of tools
- *Adequate* for our current needs

# Why Not XML?

- We manage documents, not information
- XFA Forms
  - PDF in XML
  - XML in PDF
  - XDF Files
- Adobe only source (currently) of tools to create/process XFA Forms

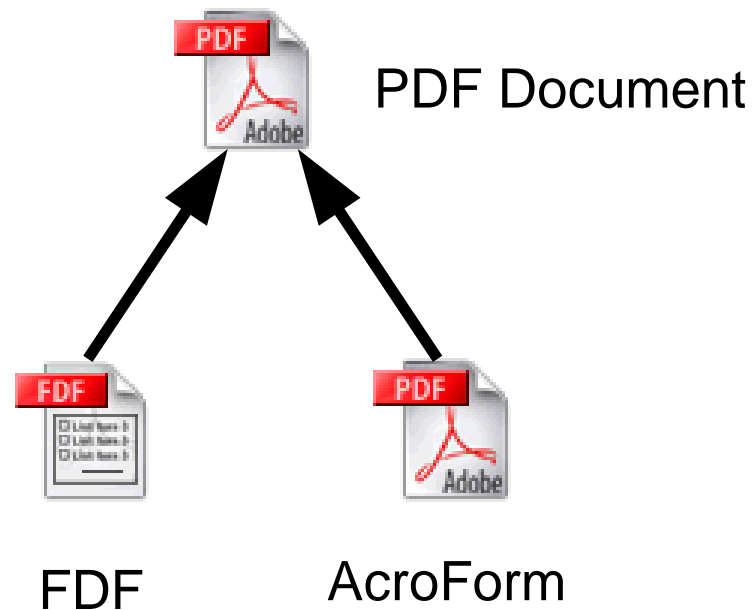


# Using Acrobat Reader

- The Acrobat free reader is a free *reader*
- To create documents with Acrobat reader
  - Full Acrobat
  - Reader Extensions
    - [FormRouter.com](http://FormRouter.com)

# AcroForm Merging Process

- FDF file + AcroForm PDF =  
Populated PDF Document



# The FDF File

- Just a formatted text file

```
%FDF-1.2
1 0 obj
<< /FDF
  << /Fields
    [ << /T (field-name-1) /V (value of field-name-1) >>
      << /T (field-name-2) /V (value of field-name-2) >> ...
    ]
  >>
>>
endobj
trailer
<< /Root 1 0 R >>
%%EOF
```

# Fields, Forms, and Data

- Bankruptcy AcroForm Templates are on the U.S. Trustee's web site
  - [www.usdoj.gov/ust/eo/bapcpa/defs/index.htm](http://www.usdoj.gov/ust/eo/bapcpa/defs/index.htm)
- Field names are listed in the 'Complete Data Schema' Excel file at the same site.
  - You must use these names
- FDF files need to be created by you
  - Or use library tools to open an AcroForm Template and populate the form directly.



# Commercial Merging Tools

- Adobe Acrobat library
- FDFmerge
- activePDF
- ... many, many more.

# Open Source Tools

- Licensing issues with open source
  - GPL issues
  - Need to 'distribute' sources
- There *are* commercial-friendly Open Source licenses and products
  - iText Library
    - LGPL and MPL
  - Pdftk program
    - GPL, but if unmodified ...
  - Some others ...



# Case Upload Issues

- *Future:* We are looking at allowing data-enabled petitions to be uploaded in place of the '.txt' file.
- Also, looking at ways to simplify handling of local court data requirements.
- We do not expect to have a national standard for case upload information.



# Questions?